

rate of this group being better than the expected survival rate are as follows: (1) These were all private patients and were in better health than the same group in the general population and (2) they were examined at six-month to one-year intervals and any other medical problems were taken care of as they arose. Other reports have shown a better survival rate in elderly patients with early carcinoma of the prostate than in their comparison population. It is evident from these data that endocrine therapy, either immediate or delayed, is preferable for men 70 years or older who have early prostatic cancer.

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### Prostate Carcinoma/Therapeutic Considerations in the Management of Gross Lymph Node Metastases

PRIMARY PROSTATE CARCINOMA can usually be controlled by megavoltage radiotherapy. Unfortunately, in many patients so treated, distant metastases later occur. The percentage of distant metastases has paralleled the expected incidence of lymph node metastases. In recent years, surgical and radiotherapeutic efforts have been expanded to include the treatment of the lymph nodes. In some patients with minimal spread, control has been achieved. In most patients with gross lymph node metastases distant metastases continue to develop. Probably neither therapeutic approach alone can effectively eradicate extensive lymph node metastases. Surgical therapy cannot encompass all lymph node disease. Radiotherapy directed to the lymph nodes is limited to 5,000 rads because of small intestine tolerance. While this dosage can sterilize micrometastases, it cannot be expected to sterilize gross lymph node metastases. If the disease in the lymph nodes is comparable to the primary tumor, dosages of 6,000 to 7,000 rads would be needed.

For the past eight years we have explored the use of estrogens and megavoltage irradiation in the management of patients with gross lymph node metastases. The diagnosis of gross lymph node metastases was made by lymphangiography or se-

lective lymph node biopsy. The usual lymphangiogram criteria for detection of lymph node metastases was not used because it has been shown to be inaccurate. Only patients with notably enlarged lymph nodes and abnormal lymph node architecture were included in the study. Estrogens were systematically given two months before radiotherapy and continued throughout radiotherapy. All patients received megavoltage radiotherapy to the primary tumor, pelvic and periaortic lymph nodes. The primary tumor received 6,500 rads and the pelvic and periaortic nodes 4,800 rads. In order to assess response to treatment, therapy with estrogens was discontinued within one year of completion of irradiation. The treatment regimen was well tolerated.

By using serial x-ray studies following lymphangiograms and serial computerized axial tomograms, we observed that estrogens can significantly reduce the tumor burden in lymph nodes. This may render radiation more effective at the modest and safe dosages that can be delivered. Following completion of radiotherapy, (18 of 25 patients) 72 percent of patients with gross lymph node metastases have remained free of disease. Follow-up computerized axial tomographic scans done at one and two years showed persistent favorable lymph node response. Eight percent are alive with disease. Twelve percent died from disease. Eight percent have been lost to follow-up. Our favorable results may be tempered as more patients are studied and followed longer. The experience does suggest that this treatment regimen can produce long periods of disease-free survival. The potential for cure exists.

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### Orchiectomy After Presumed Estrogen Failure In Treatment of Carcinoma of the Prostate

TO REASSESS the value of bilateral orchiectomy in reversing the progressive spread and pain in those patients with carcinoma of the prostate who had previously responded well to estrogen therapy, we

selected for study 29 consecutive patients who showed signs and symptoms of "breaking through" hormonal control. These were chosen from a total of 640 patients with proven carcinoma of the prostate.

A retrospective review of these 29 patients disclosed that pain developed in 19 of them. There were genitourinary complaints in nine patients, generalized fatigue and weakness in five, and rectal complaints in two. Before orchiectomy there were objective findings in all of them consistent with stage D carcinoma of the prostate; that is, bony and soft tissue metastases. In 18 there were either elevated acid and alkaline phosphatase levels or abnormalities of other blood monitors. In five an enlarging prostatic mass was found to have developed despite estrogen therapy.

Practically, the decision to do an orchiectomy depended primarily on the subjective deterioration in a patient's condition during treatment with estrogens and our assessment of the patient's re-

sponse to orchiectomy has been based usually on the degree of symptomatic relief. However, in five of the 29 patients there were objective responses manifested by either reduction of elevated blood monitors, recession of soft tissue metastases or palpable diminution of prostatic mass. Of the 29 patients, there had been response in 11 for more than six months, response in 10 of up to six months and no response in eight. A comparison of the known life spans after orchiectomy of the three groups correlated well with the patient's subjective and objective responses. These results seem to justify bilateral orchiectomy after failure of continuous response to estrogen therapy in carcinoma of the prostate.

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